Year 2004

Air Quality Division

ANNUAL AIR EMISSIONS INVENTORY QUESTIONNAIRE

For Facilities Permitted to Operate a Concrete Batch Plant

Instructions

The 2004 Annual Emissions Inventory Questionnaire includes 4 forms that are required to be completed and submitted to the Air Quality Division. Instructions for each form are included below. Upon completion, submit the forms along with the signature by the Responsible Official of the facility within 90 days of receipt of a letter from the Department.

FORM 1: **Facility General Information**

SECTION I thru III: Complete all fields as requested.

FORM 2: **Equipment, Stack & Location Data**

Equipment Data: List all the on-site equipment along with the Authorization To Operate (ATO) number where available. Indicate, if not available.

Stack Data: Provide details of each stack.

Location Data: If the portable equipment was moved from one location to another, list the dates and county it was operated in during the year 2004.

FORM 3A : **Emissions Data - Point & Fugitive Emissions**

Enter the throughput rate (tons/hour) for equipment operated and the hours operated for the year 2004. Input the number of storage piles that were stored and processed. If the number of hours stored is unknown, use 8760 hours to obtain a worst-case estimate. Enter the vehicle miles traveled for the haul roads (miles/year). ***All the formulas are set to complete the calculations as the data is unputted. Therefore, do not move or change any of the fields or columns.***

FORM 3B: **Emissions Data - Generator Emissions**

Based on the fuel used, (Gasoline, Diesel, or Natural Gas/Liquid Propane), choose the appropriate table and input the horsepower and hours of operation during the calendar year 2004.

FORM 4: **Summary & Certification**

A summarization of all the emissions by each pollutant will be listed within this form. All reports submitted to the Department should be certified true and accurate by the Responsible Official of the facility. This person is the owner or operator of the facility. **If there is a change of the Responsible Official of the facility, please notify the Department with an additional letter stating so.**

The completed questionnaire should be submitted to the following address:

Arizona Department of Environmental Quality
Attention: Darlene Celaya, Emission Inventory Team
Air Quality Division, Compliance Section 3415A-3
1110 West Washington Street
Phoenix, AZ 85007

If you have any question or have difficulty completing this form, please contact Darlene Celaya at (602) 771-7662.

FORM 1: FACILITY GENERAL INFORMATION **YEAR 2004**

SECTION I: ***Plant Identification & Mailing Information***

Customer Name: _____

Place Name: _____ Place ID: _____

Mailing Address: _____ City: _____ State: _____ Zip: _____

County: _____

Phone: _____ Fax: _____

Permit Number: _____ General Permit: Yes No

SECTION II: ***EI Contact***

EI Contact Name: _____ Title: _____

Telephone: _____ Fax: _____

SECTION III: ***Confidential Request***

Pursuant to Arizona Revised Statues §49-432 and §49-201, do you claim the Emissions Inventory data submittal confidential. If yes include which portions of the inventory are confidential along with a brief explanation:

Yes □
No □

FORM 2: EQUIPMENT, STACK & LOCATION DATA	YEAR 2004

Table 1: Equipment List

Equipment Type	Equipment ID	ATO#	Rated Capacity	Units	Actual Hours Operated

Table 2: Stack Information

	Stack #1	Stack #2	Stack #3
Height (feet)			
Diameter (feet)			
Velocity (feet/second)			
Exhaust Gas Temperature (F)			
Flow Rate (actual cubic feet per minute)			

Operation Location

Date		County of Operation
From	To	

FORM 3A: EMISSIONS DATA **YEAR 2004**

Transfer Point Emissions *Conversion Number - 1 cubic yard = 4000 pounds. 2000 pounds = 1 ton.*

Source	(1) Throughput Rate tons/hour	(2) Hours Operated hours/year	Pollutant	(3) Emission Factor pounds/ton	Emissions = (1)x(2)x(3)/2000 tons/year
Continuous & batch drop operations onto aggregate storage piles			PM10	0.000097	
			PM	0.000194	
Continuous & batch drop operations onto sand storage piles			PM10	0.000017	
			PM	0.000034	
Aggregate transfer to feed hopper			PM10	0.00017	
			PM	0.00034	
Sand transfer to feed hopper			PM10	0.000017	
			PM	0.000034	
Aggregate transfer to elevated bins			PM10	0.000097	
			PM	0.000194	
Sand transfer to elevated bins			PM10	0.000017	
			PM	0.000034	
Aggregate transfer to weigh hoppers			PM10	0.000097	
			PM	0.000194	
Sand transfer to weigh hoppers			PM10	0.000017	
			PM	0.000034	
Cement transfer to silo			PM10	0.000051	
			PM	0.000102	
Cement transfer to weigh hopper			PM10	0.000017	
			PM	0.000034	
Mixer loading (truck mix)			PM10	0.000051	
			PM	0.000102	
Mixer loading (central mix)			PM10	0.0006	
			PM	0.0012	
Conveyor transfer points (aggregate)			PM10	0.00003	
			PM	0.00006	
Conveyor transfer points (sand)			PM10	0.00002	
			PM	0.00004	
Screening			PM10	0.00048	
			PM	0.00096	
Fine screening			PM10	0.0012	
			PM	0.0024	
		Total PM10	0.0000	Total PM	

FORM 2B: EMISSIONS DATA	YEAR 2004

Storage Piles

Source	(1) No. of Piles	(2) Hours Stored hours/year	Pollutants	(3) Emission Factor pounds/hour/pile	Emissions = (1)x(2)x(3)/2000 tons/year
Active aggregate pile			PM10	0.00005	
			PM	0.0001	
Active sand pile			PM10	0.0006	
			PM	0.0012	
Inactive aggregate pile			PM10	0.00027	
			PM	0.00054	
Inactive sand pile			PM10	0.00055	
			PM	0.0011	

Haul Roads

Source	(1) Vehicle Miles Traveled in 2004 miles	Pollutants	(2) Emission Factor pounds/VMT	Emissions = (1)x(2)/2000 tons/year
Front End Loaders		PM10	0.11	
		PM	0.22	
Ready Mix Trucks		PM10	0.13	
		PM	0.26	

FORM 3: EMISSIONS CALCULATIONS **YEAR 2004**

FUEL - GASOLINE

Conversion Number - 1 kw = 1.3410 horsepower

	Generator #1				Generator #2			
Pollutants	(1) Max. Capacity horsepower	(2) Operational Hours hours/year	(3) Emission Factor pounds/hp-hour	Emissions = (1)x(2)x(3)/2000 tons/year	(4) Max. Capacity horsepower	(5) Operational Hours hours/year	(6) Emission Factor pounds/hp-hour	Emissions = (4)x(5)x(6)/2000 tons/year
Particulate Matter <10 Microns (PM10)			0.00072				0.00072	
Particulate Matter (PM)			0.00072				0.00072	
Carbon Monoxide (CO)			0.44				0.44	
Volatile Organic Compounds (VOC)			0.022				0.022	
Sulfur Oxides (SOx)			0.00059				0.00059	
Nitrogen Oxides (NOx)			0.011				0.011	

FUEL - NATURAL GAS OR LIQUID PROPANE GAS

	Generator #1				Generator #2			
Pollutants	(1) Max. Capacity horsepower	(2) Operational Hours hours/year	(3) Emission Factor pounds/hp-hour	Emissions = (1)x(2)x(3)/2000 tons/year	(4) Max. Capacity horsepower	(5) Operational Hours hours/year	(6) Emission Factor pounds/hp-hour	Emissions = (4)x(5)x(6)/2000 tons/year
Particulate Matter <10 Microns (PM10)			0.0000726				0.0000726	
Particulate Matter (PM)			0.0000726				0.0000726	
Carbon Monoxide (CO)			0.0029				0.0029	
Volatile Organic Compounds (VOC)			0.000842				0.000842	
Sulfur Oxides (SOx)			0.00000435				0.00000435	
Nitrogen Oxides (NOx)			0.0206				0.0206	

FORM 3: EMISSIONS CALCULATIONS **YEAR 2004**

FUEL - DIESEL CAPACITY - Greater Than 600 Horsepower *Conversion Number - 1 kw = 1.3410 horsepower*

	Generator #1				Generator #2			
Pollutants	(1) Max. Capacity horsepower	(2) Operational Hours hours/year	(3) Emission Factor pounds/hp-hour	Emissions = (1)x(2)x(3)/2000 tons/year	(4) Max. Capacity horsepower	(5) Operational Hours hours/year	(6) Emission Factor pounds/hp-hour	Emissions = (4)x(5)x(6)/2000 tons/year
Particulate Matter <10 Microns (PM10)			0.0007				0.0007	
Particulate Matter (PM)			0.0007				0.0007	
Carbon Monoxide (CO)			0.0055				0.0055	
Volatile Organic Compounds (VOC)			0.0007				0.0007	
Sulfur Oxides (SOx)			0.0065				0.0065	
Nitrogen Oxides (NOx)			0.024				0.024	

FUEL - DIESEL CAPACITY - Less Than or Equal to 600 Horsepower

	Generator #1				Generator #2			
Pollutants	(1) Max. Capacity horsepower	(2) Operational Hours hours/year	(3) Emission Factor pounds/hp-hour	Emissions = (1)x(2)x(3)/2000 tons/year	(4) Max. Capacity horsepower	(5) Operational Hours hours/year	(6) Emission Factor pounds/hp-hour	Emissions = (4)x(5)x(6)/2000 tons/year
Particulate Matter <10 Microns (PM10)			0.0022				0.0022	
Particulate Matter (PM)			0.0022				0.0022	
Carbon Monoxide (CO)			0.0067				0.0067	
Volatile Organic Compounds (VOC)			0.0025				0.0025	
Sulfur Oxides (SOx)			0.002				0.002	
Nitrogen Oxides (NOx)			0.031				0.031	

FORM 4: SUMMARY & CERTIFICATION	YEAR 2004

Total all the emissions for each pollutant and enter in the table below.

Pollutant	Tonnage (tons per year)
Particulate Matter (PM)	
Particulate Matter Less Than 10 Microns (PM10)	
Nitrogen Oxides (NOx)	
Sulfur Oxides (SOx)	
Volate Organic Compounds (VOC)	
Carbon Monoxide (CO)	

Certification of Truth & Accuracy

I certify that I have knowledge of the facts set forth in this questionnaire, and that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Arizona Department of Environmental Quality as public record.

Signature of Responsible Official: _____ Date: _____

Print Name: _____

Title: _____